

REMARKS

Applicants respectfully request reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follow.

Claims 13-16 and 18-19 are pending in the application, Claims 1-12 and 17 having been canceled above without prejudice to or disclaimer of the subject matter therein.

By the above amendments, Applicants have rewritten Claims 13, 16, 18 and 19 in independent form. In addition, Applicants have amended Claims 13, 16, 18 and 19 to specify that constituent (A) in the crosslinkable liquid silicone composition comprises a mixture (A-3). Support for this amendment can be found at least at original Claim 6.

Applicants thank the Examiner for acknowledging Applicants claim for foreign priority under 35 U.S.C. § 119 and for indicating that all certified copies of the priority documents have been received.

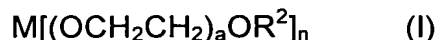
Turning now to the Official Action, Claims 13-16 and 18-19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Maruyama (U.S. Patent No. 5,391,680). For at least the reasons that follow, withdrawal of the rejection is in order.

Claim 13 defines a textile substrate coated with a crosslinkable liquid silicone composition comprising a formulation of:

(A) at least one polyorganosiloxane (POS) resin containing, per molecule, at least two different siloxyl units selected from among those of M, D, T and Q types, one of said structural units being a T unit or a Q unit, and at least three

hydrolyzable/condensable groups of OH and/or OR¹ types, in which R¹ is a linear or branched C₁ to C₆ alkyl radical;

(B) either (B-1), at least one metal alkoxide of general formula:



in which M is a metal selected from the group consisting of Ti, Zr, Ge, Si, Mn and Al; n = valency of M; the R² substituents, which may be identical or different, are each a linear or branched C₁ to C₁₂ alkyl radical; a represents zero, 1 or 2; with the provisos that, when the symbol a represents zero, the alkyl radical R² has from 2 to 12 carbon atoms and, when the symbol a represents 1 or 2, the alkyl radical R² has from 1 to 4 carbon atoms;

or (B-2), at least one metal polyalkoxide produced by the partial hydrolysis of the monomeric alkoxides of formula (I) indicated above in which the symbol R² is as defined above with the symbol a representing zero;

or a combination of (B-1) and (B-2);

or (B-3) a combination of (B-1) and/or (B-2) with:

(B-3/1), at least one optionally alkoxyated organosilane containing, per molecule, at least one C₂-C₆ alkenyl group,

and/or (B-3/2), at least one organosilicon compound comprising at least one epoxy, amino, ureido, isocyanato and/or isocyanurate radical;

(C) either (C-1), at least one silane and/or at least one POS which is essentially linear and/or at least one POS resin, each of said organosilicon compounds containing, per molecule, attaching functional group(s) (AF) capable of

reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from said AFs;

or (C-2), at least one hydrocarbonaceous compound comprising at least one saturated or unsaturated, linear or branched hydrocarbonaceous radical and optionally one or more heteroatom(s) other than Si and existing in the form of a monomeric, oligomeric (linear, cyclic or branched) or polymeric (linear, cyclic or branched) structure, the said hydrocarbonaceous compound containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from the AFs;

or a mixture of (C-1) and (C-2);

(D) optionally, a nonreactive additive system comprising:

(i) at least one organic solvent/diluent and/or at least one nonreactive organosilicon compound; (2i) and/or water, in the event of a liquid silicone formulation in aqueous dispersion or emulsion; and

(E) optionally, at least one auxiliary agent other than (D);

wherein constituent (A) comprises a mixture (A-3):

of at least one resin containing at least two different siloxyl units selected from among those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit) and $R^3SiO_{1.5}$ (T unit), at least one of said structural units being a T unit, with the proviso that the OH and/or OR^1 groups may be borne by the M, D and/or T units and the

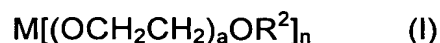
content by weight of said OH and/or OR¹ groups ranging from 0.2% to 10% by weight, and

of at least one other resin containing at least two different siloxyl units selected from among those of formulae (R³)₃SiO_{0.5} (M unit), (R³)₂SiO (D unit), R³SiO_{1.5} (T unit), and SiO₂ (Q unit), at least one of said structural units being a Q unit, with the proviso that said OH and/or OR¹ groups may be borne by the M, D and/or T units and the content by weight of said OH and/or OR¹ groups ranging from 0.2% to 10% by weight; and further wherein the R³ radicals comprising said resins being identical or different and selected from the group consisting of C₁-C₆ alkyl radicals which are linear or branched, C₂-C₄ alkenyl radicals, the phenyl radical and the 3,3,3-trifluoropropyl radical. (Emphasis added.)

Claim 16 defines a method for imparting softness, hydrophobicity, oleophobicity, hydrophilicity or antistatic properties to a textile substrate, the method comprising depositing thereon a thus effective amount of a silicone composition comprising a formulation of:

(A) at least one polyorganosiloxane (POS) resin containing, per molecule, at least two different siloxyl units selected from among those of M, D, T and Q types, one of said structural units being a T unit or a Q unit, and at least three hydrolyzable/condensable groups of OH and/or OR¹ types, in which R¹ is a linear or branched C₁ to C₆ alkyl radical;

(B) either (B-1), at least one metal alkoxide of general formula:



in which M is a metal selected from the group consisting of Ti, Zr, Ge, Si, Mn and Al; n = valency of M; the R² substituents, which may be identical or different, are each a linear or branched C₁ to C₁₂ alkyl radical; a represents zero, 1 or 2; with the provisos that, when the symbol a represents zero, the alkyl radical R² has from 2 to 12 carbon atoms and, when the symbol a represents 1 or 2, the alkyl radical R² has from 1 to 4 carbon atoms;

or (B-2), at least one metal polyalkoxide produced by the partial hydrolysis of the monomeric alkoxides of formula (I) indicated above in which the symbol R² is as defined above with the symbol a representing zero;

or a combination of (B-1) and (B-2);

or (B-3) a combination of (B-1) and/or (B-2) with:

(B-3/1), at least one optionally alkoxyated organosilane containing, per molecule, at least one C₂-C₆ alkenyl group,

and/or (B-3/2), at least one organosilicon compound comprising at least one epoxy, amino, ureido, isocyanato and/or isocyanurate radical;

(C) either (C-1), at least one silane and/or at least one POS which is essentially linear and/or at least one POS resin, each of said organosilicon compounds containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from said AFs;

or (C-2), at least one hydrocarbonaceous compound comprising at least one saturated or unsaturated, linear or branched hydrocarbonaceous radical and optionally one or more heteroatom(s) other than Si and existing in the form of a

monomeric, oligomeric (linear, cyclic or branched) or polymeric (linear, cyclic or branched) structure, the said hydrocarbonaceous compound containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from the AFs;

or a mixture of (C-1) and (C-2);

(D) optionally, a nonreactive additive system comprising:

(i) at least one organic solvent/diluent and/or at least one nonreactive organosilicon compound; (2i) and/or water, in the event of a liquid silicone formulation in aqueous dispersion or emulsion; and

(E) optionally, at least one auxiliary agent other than (D);

wherein constituent (A) comprises a mixture (A-3):

of at least one resin containing at least two different siloxyl units selected from among those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit) and $R^3SiO_{1.5}$ (T unit), at least one of said structural units being a T unit, with the proviso that the OH and/or OR^1 groups may be borne by the M, D and/or T units and the content by weight of said OH and/or OR^1 groups ranging from 0.2% to 10% by weight, and

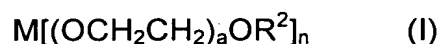
of at least one other resin containing at least two different siloxyl units selected from among those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit), $R^3SiO_{1.5}$ (T unit), and SiO_2 (Q unit), at least one of said structural units being a Q unit, with the proviso that said OH and/or OR^1 groups may be borne by the M, D and/or T units and the content by weight of said OH and/or OR^1 groups ranging from

0.2% to 10% by weight; and further wherein the R³ radicals comprising said resins being identical or different and selected from the group consisting of C₁-C₆ alkyl radicals which are linear or branched, C₂-C₄ alkenyl radicals, the phenyl radical and the 3,3,3-trifluoropropyl radical and thence curing said composition. (Emphasis added.)

Claim 18 defines a method for the treatment of a textile substrate, comprising directly depositing thereon a silicone composition comprising a formulation of:

(A) at least one polyorganosiloxane (POS) resin containing, per molecule, at least two different siloxyl units selected from among those of M, D, T and Q types, one of said structural units being a T unit or a Q unit, and at least three hydrolyzable/condensable groups of OH and/or OR¹ types, in which R¹ is a linear or branched C₁ to C₆ alkyl radical;

(B) either (B-1), at least one metal alkoxide of general formula:



in which M is a metal selected from the group consisting of Ti, Zr, Ge, Si, Mn and Al; n = valency of M; the R² substituents, which may be identical or different, are each a linear or branched C₁ to C₁₂ alkyl radical; a represents zero, 1 or 2; with the provisos that, when the symbol a represents zero, the alkyl radical R² has from 2 to 12 carbon atoms and, when the symbol a represents 1 or 2, the alkyl radical R² has from 1 to 4 carbon atoms;

or (B-2), at least one metal polyalkoxide produced by the partial hydrolysis of the monomeric alkoxides of formula (I) indicated above in which the symbol R^2 is as defined above with the symbol a representing zero;

or a combination of (B-1) and (B-2);

or (B-3) a combination of (B-1) and/or (B-2) with:

(B-3/1), at least one optionally alkoxyated organosilane containing, per molecule, at least one C_2 - C_6 alkenyl group,

and/or (B-3/2), at least one organosilicon compound comprising at least one epoxy, amino, ureido, isocyanato and/or isocyanurate radical;

(C) either (C-1), at least one silane and/or at least one POS which is essentially linear and/or at least one POS resin, each of said organosilicon compounds containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from said AFs;

or (C-2), at least one hydrocarbonaceous compound comprising at least one saturated or unsaturated, linear or branched hydrocarbonaceous radical and optionally one or more heteroatom(s) other than Si and existing in the form of a monomeric, oligomeric (linear, cyclic or branched) or polymeric (linear, cyclic or branched) structure, the said hydrocarbonaceous compound containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from the AFs;

or a mixture of (C-1) and (C-2);

(D) optionally, a nonreactive additive system comprising:

(i) at least one organic solvent/diluent and/or at least one nonreactive organosilicon compound; (2i) and/or water, in the event of a liquid silicone formulation in aqueous dispersion or emulsion; and

(E) optionally, at least one auxiliary agent other than (D);

wherein constituent (A) comprises a mixture (A-3):

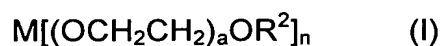
of at least one resin containing at least two different siloxyl units selected from among those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit) and $R^3SiO_{1.5}$ (T unit), at least one of said structural units being a T unit, with the proviso that the OH and/or OR^1 groups may be borne by the M, D and/or T units and the content by weight of said OH and/or OR^1 groups ranging from 0.2% to 10% by weight, and

of at least one other resin containing at least two different siloxyl units selected from among those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit), $R^3SiO_{1.5}$ (T unit), and SiO_2 (Q unit), at least one of said structural units being a Q unit, with the proviso that said OH and/or OR^1 groups may be borne by the M, D and/or T units and the content by weight of said OH and/or OR^1 groups ranging from 0.2% to 10% by weight; and further wherein the R^3 radicals comprising said resins being identical or different and selected from the group consisting of C_1 - C_6 alkyl radicals which are linear or branched, C_2 - C_4 alkenyl radicals, the phenyl radical and the 3,3,3-trifluoropropyl radical and thereafter curing said composition. (Emphasis added.)

Claim 19 defines a method for the treatment of a textile substrate, comprising coating the individual yarns, fibers and/or filaments of which, at any point in the preparation, restoration and/or maintenance thereof, with a silicone composition and comprising a formulation of:

(A) at least one polyorganosiloxane (POS) resin containing, per molecule, at least two different siloxyl units selected from among those of M, D, T and Q types, one of said structural units being a T unit or a Q unit, and at least three hydrolyzable/condensable groups of OH and/or OR¹ types, in which R¹ is a linear or branched C₁ to C₆ alkyl radical;

(B) either (B-1), at least one metal alkoxide of general formula:



in which M is a metal selected from the group consisting of Ti, Zr, Ge, Si, Mn and Al; n = valency of M; the R² substituents, which may be identical or different, are each a linear or branched C₁ to C₁₂ alkyl radical; a represents zero, 1 or 2; with the provisos that, when the symbol a represents zero, the alkyl radical R² has from 2 to 12 carbon atoms and, when the symbol a represents 1 or 2, the alkyl radical R² has from 1 to 4 carbon atoms;

or (B-2), at least one metal polyalkoxide produced by the partial hydrolysis of the monomeric alkoxides of formula (I) indicated above in which the symbol R² is as defined above with the symbol a representing zero;

or a combination of (B-1) and (B-2);

or (B-3) a combination of (B-1) and/or (B-2) with:

(B-3/1), at least one optionally alkoxyated organosilane containing, per molecule, at least one C₂-C₆ alkenyl group,

and/or (B-3/2), at least one organosilicon compound comprising at least one epoxy, amino, ureido, isocyanato and/or isocyanurate radical;

(C) either (C-1), at least one silane and/or at least one POS which is essentially linear and/or at least one POS resin, each of said organosilicon compounds containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from said AFs;

or (C-2), at least one hydrocarbonaceous compound comprising at least one saturated or unsaturated, linear or branched hydrocarbonaceous radical and optionally one or more heteroatom(s) other than Si and existing in the form of a monomeric, oligomeric (linear, cyclic or branched) or polymeric (linear, cyclic or branched) structure, the said hydrocarbonaceous compound containing, per molecule, attaching functional group(s) (AF) capable of reacting with (A) and/or (B) or capable of generating, *in situ*, functional groups capable of reacting with (A) and/or (B) and applicational functional group(s) (UF) which can be identical to or different from the AFs;

or a mixture of (C-1) and (C-2);

(D) optionally, a nonreactive additive system comprising:

(i) at least one organic solvent/diluent and/or at least one nonreactive organosilicon compound; (2i) and/or water, in the event of a liquid silicone formulation in aqueous dispersion or emulsion; and

(E) optionally, at least one auxiliary agent other than (D);

wherein constituent (A) comprises a mixture (A-3):

of at least one resin containing at least two different siloxyl units selected from among those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit) and $R^3SiO_{1.5}$ (T unit), at least one of said structural units being a T unit, with the proviso that the OH and/or OR^1 groups may be borne by the M, D and/or T units and the content by weight of said OH and/or OR^1 groups ranging from 0.2% to 10% by weight, and

of at least one other resin containing at least two different siloxyl units selected from among those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit), $R^3SiO_{1.5}$ (T unit), and SiO_2 (Q unit), at least one of said structural units being a Q unit, with the proviso that said OH and/or OR^1 groups may be borne by the M, D and/or T units and the content by weight of said OH and/or OR^1 groups ranging from 0.2% to 10% by weight; and further wherein the R^3 radicals comprising said resins being identical or different and selected from the group consisting of C_1 - C_6 alkyl radicals which are linear or branched, C_2 - C_4 alkenyl radicals, the phenyl radical and the 3,3,3-trifluoropropyl radical thereafter curing said composition. (Emphasis added.)

Maruyama relates to an odor resistant film-forming composition which forms an odor resistant film which is suitable for use on the surfaces of materials onto which it is desired to prevent the migration or lingering of odors, and which prevents the migration of odors onto such materials even when odorous substances are in direct or indirect contact therewith. (See Maruyama at col. 1, lines 6-13.)

The Official Action takes the position that the composition of Maruyama "is substantially the same as that of Applicants." (See Official Action at page 3.) In addition, the Official Action states that it is reasonable "to believe that both should impart to the substrates the same properties as set forth" in the instant claims. (See Official Action at page 3.)

It is well-established that in order to demonstrate anticipation under § 102(b) each element of the claim at issue must be found, either expressly described or under principles of inherency, in a single prior art reference. (See Kalman v. Kimberly-Clark Corp., 218 U.S.P.Q. 789 (Fed. Cir. 1983).) That is not the case here.

Specifically, Applicants submit that independent Claims 13, 16, 18 and 19 each specify that the silicone composition include a constituent (A) comprising a mixture (A-3). The A-3 mixture comprises at least one resin containing at least two different siloxyl units selected from those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit) and $R^3SiO_{1.5}$ (T unit), and at least one other resin containing at least two different siloxyl units selected from among those of formulae $(R^3)_3SiO_{0.5}$ (M unit), $(R^3)_2SiO$ (D unit), $R^3SiO_{1.5}$ (T unit), and SiO_2 (Q unit). Applicants respectfully submit that Maruyama does not anticipate the subject matter of Claims 13, 16, 18 and 19 because Maruyama does not expressly or inherently describe these features of Claims 13, 16, 18 and 19. Nowhere does Maruyama disclose or fairly suggest a textile substrate coated with such a silicone composition; a method for imparting various properties to a textile substrate by depositing thereon a thus effective amount of such a silicone composition; a method for treatment of a textile comprising directly depositing thereon such a silicone composition; or a method for the

treatment of a textile substrate comprising coating individual yarns, fibers and/or filaments with such a silicone composition.

For at least these reasons, Claims 13, 16, 18 and 19 are patentable over Maruyama. Because the remaining claims (Claims 14 and 15) depend directly from Claim 13, Applicants submit that the remaining claims are also patentable over Maruyama for at least the reasons that Claim 13 is patentable. Reconsideration and withdrawal of the § 102(b) rejection over Maruyama are respectfully requested.

From the foregoing, Applicants earnestly solicit further and favorable action in the form of a Notice of Allowance.

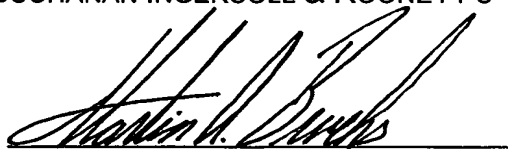
If there are any questions concerning this paper or the application in general, Applicants invite the Examiner to telephone the undersigned at the Examiner's earliest convenience.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: July 19, 2006

By:



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